

### Abstract

A transceiver is provided that can adapt itself to operate as an RF tag reader or as a  
5 bluetooth transceiver by changing its reception and transmission capabilities. The cost and area  
of an additional transceiver where both a bluetooth transceiver and an RF tag reader are required  
is avoided. The same radio part is used for both bluetooth and for RF tag reader operation. Since  
the operation band is the same, there is no need to change the center frequency of the resonance  
needed by the radio front-end. Software controlled adaptivity is included due to the different  
10 nature of these systems so that the mode of the radio hardware can be programmed easily and on  
the fly. This provides a software defined architecture tailored for bluetooth/RF tag operation.  
This invention integrates two different systems to one transceiver chip giving cost and space  
savings by reusing existing analog parts.